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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,812	06/05/2007	Hartmut Henkel	9771-015US	4992

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EXAMINER	
AMRANY, ADI	
ART UNIT	PAPER NUMBER
2836	

NOTIFICATION DATE	DELIVERY MODE
08/18/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

international@dblaw.com

Office Action Summary	Application No.	Applicant(s)	
	10/599,812	HENKEL ET AL.	
	Examiner	Art Unit	
	ADI AMRANY	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 August 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12 and 14-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-11* is/are allowed.

6)☒ Claim(s) *12 and 14-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 2, 2010 has been entered.

Response to Arguments

2. Applicants' arguments with respect to claim 1 have been considered and are persuasive. Applicants' arguments with respect to claims 12 and 14 have been considered, but are moot in view of the new ground(s) of rejection.

Wagner (US 4,778,450) discloses a UPS with a device for decoupling comprised of a transistor and a parallel diode (360), where the diode has anode and cathode connections as recited in claims 12 and 14. Wagner does not disclose the ability to pulse width modulate the first switching device (item 310), as so claims 1-11 are allowable over the cited references.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Wagner (US 4,788,450).

Wagner discloses a device for supplying uninterruptible power (fig 3; col. 5, line 1 to col. 6, line 33), comprising:

input connections (364 and ground) for connection to a primary DC voltage supply device (306);

standby-power connections (314 and ground) for connecting a standby power source (350);

output connections (315 and ground) for connecting a load (316);

a device for decoupling the input connections from the output connections in the event of a fault in the primary DC voltage supply device (360);

a first controllable switching device (310) for connecting the standby power source to the output connections in a controlled manner in the event of a fault in the primary DC voltage supply device;

a second controllable switching device (360); and

a control device (371, 381) assigned to the second controllable switching device;

characterized in that:

a parallel circuit comprising a diode (362) and the second controllable switching device (360) forms the device for decoupling;

the diode has an anode connection that is directly electrically connected to one of the input connections and a cathode connection that

is directly electrically connected to one of the output connections (shown in figure);

the second controllable switching device is a power transistor having a gate, a drain and a source terminal (G, D, S nodes of 360);

a monitoring device (all items of 370 not including 371, 381) is provided for monitoring an input voltage (at node 364) and is directly electrically connected to the source terminal of the power transistor; and

the control device is directly electrically connected to the gate terminal of the power transistor (connection between node 380 and G) and is designed to disconnect the second controllable switching device when the input voltage being monitoring signals a fault in the primary DC voltage supply device (col. 6, lines 11-26).

Wagner discloses circuitry (bottom right of figure 3) to monitor the input voltage and control the switching devices. The comparator (371) and inverter (381) are interpreted as the claimed control device, and the remaining components of circuitry 370 are interpreted as the monitoring device. As shown in the figure, the monitoring device has a direct connection to the source of switch 360 (via resistor 372) and the monitoring device also senses the input voltage at node 364 (via resistors 130, 470, 510 and diode 5221).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wagner in view of Eng (US 4,745,299).

With respect to claim 14, Wagner discloses a device for supplying uninterruptible power (fig 3; col. 5, line 1 to col. 6, line 33), comprising:

input connections (364 and ground) for connection to a primary DC voltage supply device (306);

standby-power connections (314 and ground) for connecting a standby power source (350);

first-output connections (315 and ground) for connecting a load (316);

a device for decoupling the input connections from the first-output connections in the event of a fault in the primary DC voltage supply device (360), wherein the device for decoupling comprises a diode that has an anode connection that is directly electrically connected to one of the input connections and a cathode connection that is directly electrically connected to one of the first-output connections (shown in figure);

a first controllable switching device (310) for connecting the standby power source to the first-output connections in a controlled manner in the event of a fault in the primary DC voltage supply device, the first controllable switching device comprises a power transistor; and

a control device (371, 381) which is assigned to the first controllable switching device, the control device being directly electrically connected to the gate terminal of the power transistor (inverter 381 is connected to the gate of 310).

Wagner only discloses one output (load 316). Wagner does not expressly disclose a supply output. Eng discloses a device for supplying uninterruptible power (fig 1) comprising: input connections (+/- of rectifier 11), standby connections (12), first-output connections (Von), a device for decoupling (13), a first controllable switching device (14) for connecting the standby power source to the first-output connections in a controlled manner in the event of a fault in the primary DC voltage supply (col. 1, lines 5-9; col. 4, lines 51-58).

Eng also discloses a supply output (Vo2) which is connected in parallel with the first-output connections and whose current is limited by a current limiter (rectifier and filter in the current path) resulting in a current-limited supply output.

Wagner and Eng are analogous because they are from the same field of endeavor, namely UPS systems. At the time of the invention by applicants, it would have been obvious to combine the UPS disclosed in Wagner with the supply output disclosed in Eng in order to supply uninterruptible power to more than one load.

Also, Wagner discloses that the load is represented by a resistor. As in well known in the art, one resistor can be redrawn as two parallel resistors (Rtotal= R1+R2/R1*R2). With two parallel resistors, one can be interpreted as the first-output

and the second can be interpreted as a current limiting output (since it is known that resistance slows the flow of current).

With respect to claim 15, it would be obvious to one skilled in the art to connect "state signaling devices" to the Eng second output connections (Vo2), since these limitations are drawn towards the end use of the UPS. The Wagner/Eng UPS will function in the same way regardless of what type of load is connected to the outputs. Further, the claim recites that the state signaling devices "can be connected to a second-output connection." Thus, the state signaling devices are not required for proper operation of the UPS. It would be also be obvious that a state signaling device (or any load connected to the UPS) would have a controllable switching device, since it is well known in the art to include on/off switches in electronic devices. The claim does not indicate the internal structure of the "second controllable switching device." A commonly used on/off switch meets the limitation of a controllable switching device.

With respect to claim 16, it would be obvious that for a power supply to supply power to a load, the current path between the two would have to be "shorted."

With respect to claims 17-18, it would be obvious that the on/off switches used in the loads of the Wagner/Eng UPS systems are relays or switchover relays, since these devices are art recognized equivalents for their ability to selectively connect/disconnect a current path. The preferred type of switch used can be found through minimal trial and error or by taking the electrical and physical properties of each switch into account when designing the UPS.

Allowable Subject Matter

7. Claims 1-11 are allowed.

8. The following is an examiner's statement of reasons for allowance: Regarding claim 1, the prior art does not teach or suggest, a UPS comprising, inter alia, a monitoring part that is provided for monitoring the output current flowing through the first power transistor and is directly electrically connected to the source terminal of the first power transistor, and the control part is designed to pulse-width modulate the first power transistor on the basis of current being monitored in order to limit the current which can be provided by the standby power source. Claims 2-11 depend from claim 1.

The prior art teaches a UPS with PWM control of the power supplied from a backup battery. The prior art does not teach or suggest monitoring the current at the source terminal of the pulse width modulated transistor.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADI AMRANY whose telephone number is (571)272-0415. The examiner can normally be reached on Mon-Thurs, from 10am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jared Fureman can be reached on (571) 272-2800 x36. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AA

/Jared J. Fureman/
Supervisory Patent Examiner, Art Unit 2836

08/09/2010